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A SYSTEM APPROACH TO NAVY MEDICAL EDUCATION AND TRAINING. APPEN--ETC(U)
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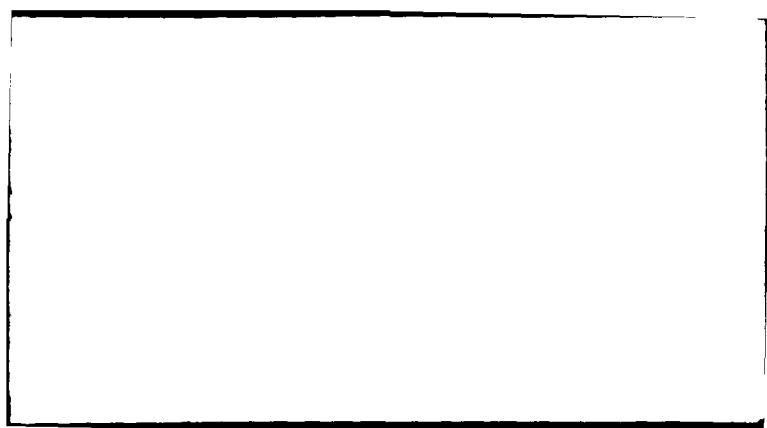
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APPENDIX 18.

RADIATION TECHNICIAN

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A SYSTEM APPROACH
to NAVY MEDICAL
EDUCATION AND TRAINING

⑨ Final rep't.

⑪ 31 Aug 74

⑫ 55

⑯ N00014-69-C-0246

Prepared under Contract to
OFFICE OF NAVAL RESEARCH
U.S. DEPARTMENT OF THE NAVY

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Education and Training R&D
Bureau of Medicine and Surgery (Code 71G)

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Final Report (Vols. I & II) Appendix: 15 / 8	2. GOVT ACCESSION NO. AD-A085694	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) A System Approach to Navy Medical Education and Training	5. TYPE OF REPORT & PERIOD COVERED FINAL REPORT	
7. AUTHOR(s)	6. PERFORMING ORG. REPORT NUMBER N00014-69-C-0246	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Office of Naval Research Department of the Navy Arlington, Virginia 22217	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 43-03X.02	
11. CONTROLLING OFFICE NAME AND ADDRESS Office of Naval Research Department of the Navy Arlington, Virginia 22217	12. REPORT DATE 31-8-74	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Office of Naval Research Department of the Navy Arlington, Virginia 22217	15. SECURITY CLASS. (of this report) UNCLASSIFIED	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES None		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Education and Training Medical Training Nurse Training Dentist Training	Medical Technician Job Analysis Task Analysis Curriculum Development	
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The study objective consisted of a determination of what the health care personnel in the Navy's Medical Department, Bureau of Medicine and Surgery actually do in their occupations; improving the personnel process (education and training); and building a viable career pathway for all health care personnel. Clearly the first task was to develop a system of job analyses applicable to all system wide health care manpower tasks. A means of postulating simplified occupational clusters covering some 50		

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currently designated Navy enlisted occupations, 20 Naval Enlisted Classification Codes (NEC's) were computerized. A set of 16 groupings that cover all designated occupations was developed so as to enhance the effectiveness of professionals and sub-professionals alike.

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FOREWORD

The project, "Application of a System Approach to the Navy Medical Department Education and Training Programs," was initiated in May of 1969 as a realistic, comprehensive response to certain objectives set forth in ADO 43-03X, and to memoranda from both the Secretary of Defense and the Assistant Secretary of Defense, Manpower and Reserve Affairs. The Secretary's concern was stated in his memorandum of 29 June 1965, "Innovation in Defense Training and Education." More specific concerns were stated in the Assistant Secretary's memorandum of 14 June 1968, "Application of a System Approach in the Development and Management of Training Courses." In this he called for "vigorous and imaginative effort," and an approach "characterized by an organized training program with precise goals and defined operational interrelation among instructional system components." He also noted, "Job analyses with task descriptions expressed in behavioristic terms are basic and essential to the development of precise training goals and learning objectives."

The Project

System survey and analysis was conducted relative to all factors affecting education and training programs. Subsequently, a job-analysis sub-system was defined and developed incorporating a series of task inventories "...expressed in behavioristic terms..." These inventories enabled the gathering of job activity data from enlisted job incumbents, and data relating to task sharing and delegation from officers of the Medical, Nurse and Dental Corps. A data management sub-system was devised to process incumbent data, then carry out needed analyses. The development of initial competency curricula based upon job analysis was implemented to a level of methodology determination. These methods and curriculum materials constituted a third (instructional) sub-system.

Thus, as originally proposed, a system capability has been developed in fulfillment of expressed need. The system, however, remains untested and unevaluated. ADO 43-03X called for feasibility tests and cost-effectiveness determination. The project was designed to so comply. Test and evaluation through the process of implementation has not proved feasible in the Navy Medical Department within the duration of the project. As designed and developed the system does have "...precise goals and defined operational interrelation among instructional system components." The latter has been achieved in terms of a recommended career structure affording productive, rewarding manpower utilization which bridges manpower training and health care delivery functions.

Data Management Sub-System

Job analysis, involving the application of comprehensive task inventories to thousands of job incumbents, generates many millions of discrete bits of response data. They can be processed and manipulated only by high speed computer capability using rigorously designed specialty programs. In addition to numerical data base handling, there is the problem of rapidly and accurately manipulating a task statement data base exceeding ten thousand carefully phrased behavioral statements. Through the use of special programs, task inventories are prepared, printouts for special purposes are created following a job analysis application, access and retrieval of both data and tasks are efficiently and accurately carried out, and special data analyses conducted. The collective programs, techniques and procedures comprising this sub-system are referred to as the Navy Occupational Data Analysis Language (NODAL).

Job Analysis Sub-System

Some twenty task inventory booklets (and associated response booklets) were the instruments used to obtain job incumbent response data for more than fifty occupations. An inventory booklet contains instructions, formatted questions concerning respondent information ("bio-data"), response dimension definitions, and a list of tasks which may vary in number from a few hundred to more than a thousand per occupational field.

By applying NODAL and its associated indexing techniques, it is possible to assemble modified or completely different inventories than those used in this research. Present inventories were applied about three years ago. While they have been rendered in operational format, they should not be re-applied until their task content is updated.

Response booklets were designed in OPSCAN mode for ease of recording and processing responses.

Overall job analysis objectives and a plan of administration were established prior to inventory preparation, including the setting of provisional sample target sizes. Since overall data attrition was forecast to approximate twenty percent, final sample and sub-sample sizes were adjusted accordingly. Stratified random sampling techniques were used. Variables selected (such as rating, NEC, environment) determined stratifications, together with sub-population sizes. About fifteen percent of large sub-populations were sought while a majority or all members of small sub-populations were sought.

Administration procedures were established with great care for every step of the data collecting process, and were coordinated with sampling and data analysis plans. Once set, the procedures were formalized as a protocol and followed rigorously.

Instructional Sub-System

Partial "competency curricula" have been composed as an integral sub-system bridging what is required as performance on the job with what is, accordingly, necessary instruction in the training process. Further, curriculum materials were developed to meet essential requirements for implementing the system so that the system could be tested and evaluated for cost effectiveness. However, due to the fact that test and evaluation was not feasible in the Navy Medical Department within the duration of the project, it was not possible to complete the development of the system through the test and evaluation phase. The inability to complete this phase also interrupted the planned process for fully developing the curricula; therefore, instead of completed curricula ready for use in the system, the curricula were partially developed to establish the necessary sub-system methodology. The competency curricula are based on tasks currently performed by job incumbents in 1971. (The currency of a given curriculum depends upon periodic analysis of incumbents' jobs, and its quality control resides in the evaluation of the performance competency of the program's graduates.)

A competency curriculum provides a planned course of instruction or training program made up of sequenced competency units which are, in turn, comprised of sequenced modules. These modules, emphasizing performance objectives, are the foundation of the curriculum.

A complete module would be comprised of seven parts: a cluster of related tasks; a performance objective; a list of knowledges and skills implied by the objective; a list of instructional strategies for presenting the knowledges and skills to the learner; an inventory of training aids for supporting the instructional strategies; a list of examination modes; and a statement of the required training time. In this project, curriculum materials have been developed to various levels of adequacy, and usually comprise only the first three parts; the latter four need to be prepared by the user.

The performance objective, which is the most crucial part of the module, is the basis for determining curriculum content. It is composed of five essential elements: the stimulus which initiates the behavior; the behavior; the conditions under which the behavior takes place; the criteria for evaluating the behavior; and the consequence or results of the behavior. A sixth element, namely next action, is not essential; however, it is intended to provide linkage for the next behavior.

Knowledges and skills listed in the module are those needed by the learner for meeting the requirements of the performance objective.

Instructional strategies, training aids, examination modes and training time have been specified only for the Basic Hospital Corps Curriculum. The strategies, aids and modes were selected on the basis of those considered to be most supportive in presenting the knowledges and skills so as to provide optimum learning effectiveness and training efficiency. The strategies extend from the classroom lecture as traditionally presented by a teacher to the more sophisticated mediated program for self-instruction. The training aids, like strategies, extend from the traditional references and handout material in the form of a student syllabus to mediated programs for self-instruction supported by anatomical models. Examination modes extend from the traditional paper and pencil tests to proficiency evaluation of program graduates on the job, commonly known as feedback. Feedback is essential for determining learning effectiveness and for quality control of a training program. The kind of instructional strategies, training aids and examination modes utilized for training are limited only by such factors as staff capability and training budget.

The training time specified in the Basic Hospital Corps Curriculum is estimated, based upon essential knowledge and skills and program sequence.

The competency curriculum module, when complete, provides all of the requirements for training a learner to perform the tasks set forth in the module. A module may be used independently or related modules may be re-sequenced into modified competency units to provide training for a specific job segment.

Since the curricula are based upon tasks performed by job incumbents in 1971, current analysis of jobs needs to be accomplished using task inventories that have been updated to reflect changes in performed tasks. Subsequent to job analysis, a revision of the curricula should be accomplished to reflect task changes. When the foregoing are accomplished, then faculty and other staff members may be indoctrinated to the competency curricula and to their relationship to the education and training system.

In addition to the primary use for the systematic training of job incumbents, these curricula may be used to plan for new training programs, develop new curricula, and revise existing curricula; develop or modify performance standards; develop or modify proficiency examinations; define billets; credentialize training programs; counsel on careers; select students; and identify and select faculty.

The System

Three sub-systems, as described, comprise the proposed system for Education and Training Programs in The Navy Medical Department. This exploratory and advanced developmental research has established an overall methodology for improved education and training incorporating every possible means of providing bases for demonstrating feasibility and cost effectiveness. There remains only job analysis sub-system updating, instructional sub-system completion, and full system test and evaluation.

Acknowledgements

The authors wish to acknowledge the invaluable participation of the several thousands of Naval personnel who served as respondents in inventory application. The many military and civilian personnel who contributed to developmental efforts are cited by name in the Final Report.

The authors also wish to acknowledge former colleagues for singularly important contributions, namely, Elias H. Porter, Ph.D., Carole K. Kauffman, R.N., M.P.H., Mary Kay Munday, B.S.N., R.N., Gail Zarren, M.S.W., and Renee Schick, B.A.

Identity and acknowledgement of the project Advisory Group during the project's final year is recorded in the Final Report.

Lastly, the project could not have been commenced nor carried out without the vision, guidance and outstanding direction of Ouida C. Upchurch, Capt., NC, USN, Project Manager.

NAVY MEDICAL DEPARTMENT

TASK INVENTORY BOOKLET

RADIATION

CONSTRAINTS AND ETHICAL USE

This task inventory was developed three years ago in a first-version key punch format for education and training research purposes.

The present "operational" format, using a mark-sense response booklet (Opscan), is recommended for future applications. The task and equipment statements comprising the bulk of the inventory are precisely the same (less duplicate entries) as in the original research tools but rearranged for Opscan mode. Biographical data questions have also been reformatted for Opscan (NEC codes should be updated).

The processing, administering and formatting of this inventory have thus been readied for operational application.

It is strongly recommended that this inventory be updated in its task and equipment statement sections before actual operational use. These reasons pertain:

- Changes in medical or related procedures or techniques
- Some tasks may violate current policy or be obsolete
- Equipment changes may have occurred
- The objective of task comprehensiveness may change
- Objectives may shift to embrace manpower utilization as well as education and training

In the latter regard, the present operational format includes a "time to perform" dimension (as well as frequency of performance and two additional optional blank response dimension fields). As a response dimension, "time to perform" has been validated within the context of inventories for professional personnel where the objectives embraced utilization (i.e., time associated with shared and delegable tasks). The original Enlisted inventory content was directed to education and training factors only. If "time to perform" is to be used operationally, each task and equipment statement should be examined by expert job incumbents to remove possible overlaps which could confound "time to perform" data. This review process would also serve other purposes cited above.

A general precaution is in order.

When task analysis inventories are poorly prepared, loosely administered, administered according to less than rigorous sampling, or are handled casually in processing or interpretation, they will inevitably produce poor or questionable data, at best. At worst, such practices will result in loss of money and time, and produce dangerous data. Inventories should be prepared, applied, processed and interpreted only by knowledgeable professional and technical personnel. As in the cases of ethically controlled behavior tests, inventories should not be casually copied or distributed, and should remain under the control of authorized, trained personnel. Factors effecting reliability and validity should be fully appreciated.

GENERAL INSTRUCTIONS

There are two parts to be completed for this survey:

Part I	Career Background Information (answers to be recorded in this TASK BOOKLET)
Part II A	List of Tasks (answers to be recorded on the accompanying RESPONSE BOOKLET)
B	List of Instruments and Equipment (answers to be recorded on the accompanying RESPONSE BOOKLET)

Each part is preceded by a set of instructions. Be sure to read them carefully before you start answering each part. All instructions are found on the tinted pages.

PLEASE USE ONLY NUMBER 2 LEAD PENCILS. ERASE ALL CHANGES CAREFULLY AND COMPLETELY. DO NOT PUT ANY MARKS OTHER THAN YOUR ANSWERS ON EACH RESPONSE PAGE.

DO NOT FOLD, WRINKLE, CREASE OR DETACH PAGES
FROM EITHER TASK BOOKLET OR RESPONSE BOOKLET.

WHEN RECORDING YOUR ANSWERS YOU MAY WANT TO USE A RULER TO READ ACROSS ANSWER AND QUESTION COLUMNS.

WHEN YOU HAVE COMPLETED YOUR RESPONSES, PUT THE TASK INVENTORY BOOKLET AND THE RESPONSE BOOKLET IN THE ENCLOSED SELF-ADDRESSED ENVELOPE. SEAL AND RETURN TO THE OFFICER WHO GAVE YOU THIS PACKAGE. COMPLETED BOOKLETS SHOULD BE RETURNED WITHIN ONE WEEK OF RECEIPT.

DO NOT FILL IN

Part I

CAREER BACKGROUND INFORMATION

Check that the Form and Serial Number in this box match those on the cover of this Booklet

N _____
Form _____ Serial No. _____

(1)
(7)

Please fill out completely

Name of your Duty Station _____

City & State (if applicable) _____

Your Name _____

Social Security Number _____

(14)

PLEASE ANSWER QUESTIONS BELOW BY ENTERING THE PROPER NUMBER IN THE BLANKS PROVIDED. TWO BLANKS REQUIRE A TWO-DIGIT ANSWER. DISREGARD NUMBERS IN PARENTHESIS.

ENTER
ANSWERS
HERE

Q1. Select the number to indicate the Corps to which you belong:

1. Dental Technician
2. Hospital Corps

Q2. Indicate your military status:

1. USN
2. USNR

Q3. Indicate your pay grade:

1. E1	6. E6
2. E2	7. E7
3. E3	8. E8
4. E4	9. E9
5. E5	

Q4. Indicate your total years of active duty in the Navy to date: (estimate to the nearest year)

1. Less than 2 years
2. 2 to 4 years
3. 5 to 8 years
4. More than 8 years

Q1. _____ (23)

Q2. _____ (24)

Q3. _____ (25)

Q4. _____ (26)

ENTER
ANSWERS
HERE

Q5. Select the number to indicate your present immediate supervisor:

1. Physician
2. Dentist
3. Nurse
4. MSC Officer
5. HM or DT
6. Other (Specify) _____

Q5. ____ (27)

Q6. Select the number to indicate the average number of hours you work per week: (estimate to the nearest hour)

1. 35 to 40 hours
2. 41 to 50 hours
3. More than 50 hours

Q6. ____ (28)

Q7. Please give an estimate of the percent of time you spend on the following (write five percent as 05):

1. Inpatient care
2. Outpatient care
3. Teaching
4. Administration
5. Other (specify) _____

Q7. ____

1. ____ % (29)
2. ____ % (31)
3. ____ % (33)
4. ____ % (35)
5. ____ % (37)

Q8. Assuming that most or all of the following factors are of importance to you, select the three which, if improved, would contribute most to your job satisfaction:

- 01 Salary and/or promotion opportunities
- 02 Retirement benefits
- 03 Housing
- 04 Educational advancement opportunities
- 05 Stability of tour of duty
- 06 Physical facilities and equipment
- 07 Administrative and clerical support
- 08 Work load
- 09 Personal career planning
- 10 Opportunity to attend professional meetings

Q8. ____ (39)
____ (41)
____ (43)

ENTER
ANSWERS
HERE

Q9. Using the list on page vii specify your current NEC by writing the last two digits of the CODE.

Q9. ____ (45)

Q10. Select the number to indicate your years of experience corresponding to the NEC stated in Q9: (estimate to the nearest year)

Q10. ____ (47)

1. Less than 1 year 4. 6 to 10 years
2. 1 to 2 years 5. 11 to 15 years
3. 3 to 5 years 6. More than 15 years

Q11. If you have other NEC(s) in addition to the one specified in Q9, check page vii and indicate the last two digits of the CODE(s). If you have none, enter "99" in answer space for Q11 and Q12.

Q11a. ____
b. ____ (48)
(50)

Q12. Select the number to indicate the years of experience you had in the NEC(s) stated in Q11 (estimate to the nearest year).

Q12a. ____
b. ____ (52)
(53)

1. Less than 1 year 4. 6 to 10 years
2. 1 to 2 years 5. 11 to 15 years
3. 3 to 5 years 6. More than 15 years

Q13. From the list below, write the two-digit CODE to indicate the specialty of the department in which you are currently functioning.

Q13. ____ (54)

CODE

01	Administration	18	Urology
02	Education	19	Intensive Care
03	Anesthesiology	20	Operating Room
04	Coronary Care	21	Emergency Room
05	Dermatology	00	Other (specify)
06	Medicine - OPD		
07	Medicine - Wards		
08	Obstetrics/Gynecology		
09	Ophthalmology		
10	Orthopedics		
11	Otolaryngology		
12	Medical Laboratory		
13	Pediatrics		
14	Psychiatry		
15	Public Health		
16	Radiology		
17	General Surgery-Wards		

ENTER
ANSWER
HERE

Q14. Select the number to indicate the type of duty station at which you currently work, and have been working for at least 30 days:

1. Hospital
2. Dispensary
3. Aboard ship/sub, no M.O. (or D.O.) aboard
4. Aboard ship/sub, M.O. (or D.O.) aboard
5. Aviation squadron/wing, Navy or Marine
6. Marine ground forces
7. Administrative Commands
8. Research Commands or PMUs
9. Dental Clinic
0. Other _____

Q14. _____ (56)

Q15. Indicate the number of people you normally supervise:

0. None	3. 6-10
1. 1-2	4. 11-20
2. 3-5	5. over 20

Q15. _____ (57)

MEDICAL/DENTAL NEC (NAVAL ENLISTED CODE) AND TITLE

0000 General Service, Hospital or Dental Corpsman
3371 Health Physics & Process Control Technician
3391 Nuclear Power Plant Operator
8402 Nuclear Submarine Medicine Technician
8403 Submarine Medicine Technician
8404 Medical Field Service Technician
8405 Advanced Hospital Corps Technician (Class B)
8406 Aviation Medicine Technician
8407 Nuclear Medicine Technician
8408 Cardiopulmonary Technician
8409 Aviation Physiology Technician
8412 Clinical Laboratory Assistant Technician
8413 Tissue Culture Technician
8414 Clinical Chemistry Technician
8415 Medical Technology Technician
8416 Radioactive Isotope Technician
8417 Clinical Laboratory Technician
8432 Preventive Medicine Technician
8433 Tissue Culture and Tissue Bank Technician
8442 Medical Administrative Technician
8452 X-ray Technician
8453 Electrocardiograph/Basal Metabolism Technician
8454 Electroencephalograph Technician
8462 Optician (General) Technician
8463 Optician Technician
8466 Physical and Occupational Technician
8472 Medical Photography Technician
8482 Pharmacy Technician
8483 Operating Room Technician
8484 Eye, Ear, Nose, & Throat Technician
8485 Neuropsychiatry Technician
8486 Urological Technician
8487 Occupational Therapy Technician
8488 Orthopedic Appliance Mechanic
8489 Orthopedic Cast Room Technician
8492 Special Operations Technician
8493 Medical Deep Sea Diving Technician
8494 Physical Therapy Technician
8495 Dermatology Technician
8496 Embalming Technician
8497 Medical Illustration Technician
8498 Medical Equipment Repair Technician
8703 DT General, Advanced
8707 DT Field Service
8713 DT Clinical Laboratory
8714 DT Research Assistant
8722 DT Administrative
8732 DT Repair
8752 DT Prosthetic, Basic
8753 DT Prosthetic, Advanced
8765 DT Maxillofacial Prosthetic

RESPONSE BOOKLET INSTRUCTIONS

- To complete Part II, you need this TASK BOOKLET and the accompanying RESPONSE BOOKLET. Record all your answers to Part II in the RESPONSE BOOKLET.
- All pages of the RESPONSE BOOKLET are machine readable. In order for responses to be properly read, please be sure to:
 1. Use a No. 2 pencil only
 2. Carefully and completely shade the number corresponding to your answer under each column.
- Complete Page 00 of the RESPONSE BOOKLET first. Follow instructions given on the page. Fill in Line 1, and Boxes 2, 3, 4, and 5. Ignore all other boxes. BE SURE TO ENTER YOUR SOCIAL SECURITY NUMBER (WRITE DOWNWARD) IN THE BLANK SPACES IN BOX 3: then darkly shade the corresponding number on each line. An example of a completed Page 00 is shown on the next page (the handwritten notes in this example are for clarification only. Please do not make similar notes on your RESPONSE BOOKLET.)
- After completing Page 00, carefully read and follow instructions given on pages x through xiv.
- PLEASE HANDLE YOUR RESPONSE BOOKLET CAREFULLY. KEEP IT CLEAN AND AWAY FROM CHEMICALS. DO NOT DETACH, FOLD, WRINKLE OR CROSS OUT ANY PAGE.

DO NOT MARK IN THESE BOXES	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
RESPONSE BOOKLET				
Serial No. 0233				

My name is

1 NAME Mary Smith

Ignore these boxes)

TASK ANALYSIS BACKGROUND DATA SHEET

SEE TASK STATEMENT BOOKLET FOR INSTRUCTIONS TO COMPILE BOOKLET	6	0 1 2 3 4 5 6 7 8 9	13 0 1
	6	0 1 2 3 4 5 6 7 8 9	14 0 1
	6	0 1 2 3 4 5 6 7 8 9	15 0 1
	6	0 1 2 3 4 5 6 7 8 9	16 0 1
	7	0 1 2 3 4 5 6 7 8 9	17 0 1
	7	0 1 2 3 4 5 6 7 8 9	18 0 1
	7	0 1 2 3 4 5 6 7 8 9	19 0 1
	7	0 1 2 3 4 5 6 7 8 9	20 0 1
	8	0 1 2 3 4 5 6 7 8 9	21 0 1
	8	0 1 2 3 4 5 6 7 8 9	22 0 1
	8	0 1 2 3 4 5 6 7 8 9	23 0 1
	8	0 1 2 3 4 5 6 7 8 9	24 0 1
	9	0 1 2 3 4 5 6 7 8 9	25 0 1
	9	0 1 2 3 4 5 6 7 8 9	26 0 1
	9	0 1 2 3 4 5 6 7 8 9	27 0 1
	9	0 1 2 3 4 5 6 7 8 9	28 0 1
	10	0 1 2 3 4 5 6 7 8 9	29 0 1
	10	0 1 2 3 4 5 6 7 8 9	30 0 1
	11	0 1 2 3 4 5 6 7 8 9	31 0 1
	11	0 1 2 3 4 5 6 7 8 9	32 0 1
	12	0 1 2 3 4 5 6 7 8 9	33 0 1
	12	0 1 2 3 4 5 6 7 8 9	34 0 1

Ignore these boxes

SEE COVER OF YOUR TASK BOOKLET Form N20, Ser. No. 0233

4 TASK BOOKLET	FORM	A B C D E F G H I J K L M N	O P Q R S T U V W X Y Z
	8 7	1 3 3 8 6 7 8 8	
	9 8	2 3 6 6 6 7 8 8	
	10 9	1 3 2 3 6 6 7 8 8	
	SERIAL NO.	1 3 2 3 6 6 7 8 8	
	10 9	2 3 6 6 6 7 8 8	
	8 7	1 3 3 8 6 7 8 8	
	9 8	2 3 6 6 6 7 8 8	
	10 9	1 3 2 3 6 6 7 8 8	

*My birthday is May 10, 1940
May = 05 1940 = 40*

5	MONTH	1 2 3 4 5 6 7 8 9
DATE	DAY	10 11 12 13 14 15 16 17 18
BIRTH	YEAR	19 20 21 22 23 24 25 26 27

PART II

PART II A LIST OF TASKS

PART II B LIST OF INSTRUMENTS AND EQUIPMENT

HOW TO RESPOND TO TASK STATEMENTS AND INSTRUMENTS

Your responses to each statement should be marked on the corresponding page, column and item number in your RESPONSE BOOKLET.

Note that each page in your RESPONSE BOOKLET has two response blocks. The left-hand block (items 1-25) is for entering responses to statements printed on LEFT pages of this TASK BOOKLET; the right-hand block (items 26-50) is for the responses to statements printed on RIGHT pages. Make sure that your answers are recorded in the appropriate block on every page. DO NOT MAKE ANY MARKS OTHER THAN YOUR ANSWERS!

Each time you start a new page in your RESPONSE BOOKLET, check the page on your TASK BOOKLET. See that the numbers match; then mark the page number in "Box X" in the response page (see instructions at the top of response page.) This is necessary for computer processing.

Tear the Response Guide (p. xiii) at the perforation, and use the correct side to respond to each task or instrument found on the following white pages. Note the following detailed explanation of responses.

Column A - (the responses to Column A differ for Part II A and Part II B, be sure to use the appropriate set of responses.)

Part II A

How often did you do this task within the last month?
(If you were on leave, consider your immediate past working month.)

- 0 = Did not do
- 1 = Did less than 5 times
- 2 = Did 5 to 20 times
- 3 = Did 21 to 50 times
- 4 = Did 51 to 100 times
- 5 = Did more than 100 times

Part II B

How often did you use this instrument or piece of equipment within the last month? (If you were on leave, consider your immediate past working month.)

- 0 = Did not use
- 1 = Used less than 5 times
- 2 = Used 5-20 times
- 3 = Used 21-50 times
- 4 = Used 51-100 times
- 5 = Used more than 100 times

If answer in Column A is 0, go to the next statement. If answer is 1, 2, 3, 4 or 5, answer also Columns B, C & D.

Column B

Indicate the approximate time you spent on a single performance the last time you performed this task.

0 = less than one minute

1 = 1 to 4 minutes

2 = 5 to 10 minutes

3 = 11 to 20 minutes

4 = 21 to 30 minutes

5 = 31 to 60 minutes

6 = 1 to 2 hours

7 = more than 2 hours

Column C

Do you feel you need additional training to perform this task?

0 = No

1 = Yes

RESPONSE GUIDE

(DO NOT LOSE THIS TAB)

HOW TO RESPOND TO PART II A - LIST OF TASKS

xiii

ANSWER COL. A FIRST. IF A = 0, GO TO NEXT STATEMENT: IF A = 1-5, ANSWER COLUMNS B, C & D ALSO.

A	B	C	D
FREQUENCY	TIME CONSUMED (single performance the last time performed)	DO YOU FEEL YOU NEED ADDITIONAL TRAINING TO PER- FORM THIS TASK?	OPTIONAL (Additional instructions will be given if this column is used)
0=DID NOT DO LAST MONTH	0=LESS THAN 1 MINUTE	0=NO	
1=DID LESS THAN 5 TIMES	1=1 TO 4 MINUTES	1=YES	
2=DID 5 TO 20 TIMES	2=5 TO 10 MINUTES		
3=DID 21 TO 50 TIMES	3=11 TO 20 MINUTES		
4=DID 51 TO 100 TIMES	4=21 TO 30 MINUTES		
5=DID MORE THAN 100 TIMES	5=31 TO 60 MINUTES		
	6=1 TO 2 HOURS		
	7=MORE THAN 2 HOURS		

RESPONSE GUIDE

(DO NOT LOSE THIS TAB)

HOW TO RESPOND TO PART II B - LIST OF INSTRUMENTS AND EQUIPMENT

ANSWER COL. A FIRST. IF A = 0, GO TO NEXT STATEMENT: IF A = 1-5, ANSWER COLUMNS B, C & D ALSO.

A	B	C	D
FREQUENCY	TIME CONSUMED (last time used)	DO YOU FEEL YOU NEED ADDITIONAL TRAINING TO PER- FORM THIS TASK?	OPTION (Additional instructions will be given if this column is used)

A

0=DID NOT USE LAST MONTH
1=USED LESS THAN 5 TIMES
2=USED 5 TO 20 TIMES
3=USED 21 TO 50 TIMES
4=USED 51 TO 100 TIMES
5=USED MORE THAN 100 TIMES

B

0=LESS THAN 1 MINUTE
1=1 TO 4 MINUTES
2=5 TO 10 MINUTES
3=11 TO 20 MINUTES
4=21 TO 30 MINUTES
5=31 TO 60 MINUTES
6=1 TO 2 HOURS
7=MORE THAN 2 HOURS

C

0=NO
1=YES

D

(Additional instructions
will be given if this
column is used)

Part II A
LIST OF TASKS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 01
| OF RESPONSE BOOKLET

1 | TAKE ROUTINE ABDOMINAL X-RAYS
|
2 | TAKE ROUTINE CERVICAL SPINE X-RAYS
|
3 | TAKE ROUTINE CHEST X-RAYS
|
4 | TAKE ROUTINE FACIAL X-RAYS
|
5 | TAKE ROUTINE LUMBAR SPINE X-RAYS
|
6 | TAKE ROUTINE MASTOID X-RAYS
|
7 | TAKE ROUTINE SINUS X-RAYS
|
8 | TAKE ROUTINE SKULL X-RAYS
|
9 | TAKE ROUTINE THORACIC SPINE X-RAYS
|
10 | TAKE ROUTINE X-RAYS OF LOWER EXTREMITIES
|
11 | TAKE ROUTINE X-RAYS OF UPPER EXTREMITIES
|
12 | TAKE ROUTINE X-RAYS OF KIDNEY/URETER/BLADDER
|
13 | TAKE ROUTINE X-RAYS OF MANDIBLE
|
14 | TAKE ROUTINE X-RAYS OF RIBS AND STERNUM
|
15 | TAKE ROUTINE X-RAYS OF SACRUM AND COCCYX
|
16 | TAKE ROUTINE X-RAYS OF TEMPOROMANDIBULAR JOINTS
|
17 | TAKE LONG BONE X-RAY SERIES
|
18 | TAKE X-RAYS FOR BONE AGE RADIOGRAPHS
|
19 | TAKE X-RAYS FOR METASTATIC SURVEYS
|
20 | TAKE FOREIGN BODY LOCALIZATION X-RAYS OF EXTREMITIES
|
21 | TAKE FOREIGN BODY LOCALIZATION X-RAYS OF SKULL
|
22 | TAKE FOREIGN BODY LOCALIZATION X-RAYS OF THORAX
|
23 | TAKE PHOTOFLUROGRAMS
|
24 | TAKE FOREIGN BODY LOCALIZATION X-RAYS OF EYE
|
25 | TAKE X-RAYS OF SMALL INTESTINE

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 01
| OF RESPONSE BOOKLET

26 | TAKE X-RAYS FOR CONTRAST STUDIES OF LARGE BOWEL OR COLON

27 | TAKE X-RAYS FOR UPPER GI SERIES

28 | TAKE INTRAVENOUS CHOLANGIOPHARMAS

29 | TAKE X-RAYS FOR CHOLECYSTOGRAPHIC STUDIES

30 | TAKE ARTHROGRAMS

31 | TAKE BRONCHOGRAMS

32 | TAKE MAMMOGRAMS

33 | TAKE SIALOGRAMS

34 | TAKE ABDOMINAL ARTERIOGRAMS

35 | TAKE CEREBRAL ANGIOGRAMS

36 | TAKE INFERIOR VENACAVAGRAMS

37 | TAKE VENTRICULOGRAMS

38 | TAKE PNEUROENCEPHALOGRAMS

39 | TAKE MYELOGRAMS

40 | TAKE PNEUMOCARDIOGRAMS

41 | TAKE ANGIOCARDIOGRAMS

42 | TAKE FEMORAL ARTERIOGRAMS

43 | TAKE LYMPHANGIOPHARMAS

44 | TAKE PHLEBOGRAMS

45 | TAKE RENAL ARTERIOGRAMS

46 | TAKE RETROGRADE CYSTOGARM

47 | TAKE RETROGRADE PYELOGRAM

48 | TAKE URETHROGRAMS

49 | TAKE CYSTOGRAMS

50 | TAKE INTRAVENOUS PYELOGRAMS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 02
| OF RESPONSE BOOKLET

- 1 TAKE HYPERTENSIVE INTRAVENOUS PYELOGRAMS
- 2 TAKE RENAL LOOPGRAM
- 3 TAKE CIXU, I.E. CONSTANT INFUSION
- 4 DO RENAL SPLIT FUNCTION TEST, E.G. STAMEY
- 5 TAKE PNEUMOCYSTOGRAMS
- 6 TAKE FETOGRAMS
- 7 TAKE HYSTEROSALPINGIOGRAMS
- 8 TAKE PLACENTOGRAMS
- 9 TAKE X-RAYS FOR PELVIMETRIC STUDIES
- 10 TAKE BITE-WING X-RAYS
- 11 TAKE OCCLUSAL X-RAYS
- 12 DETERMINE EXPOSURE TECHNIQUE FOR X-RAY SERIES
- 13 DETERMINE AND SET KILOVOLTAGE-MAJOR/MINOR-PEAK METER ON X-RAY UNIT
- 14 DETERMINE AND SET MA METER ON X-RAY UNIT
- 15 DETERMINE AND SET IMPULSE TIMER ON X-RAY UNIT
- 16 SELECT ALTERNATIVE TECHNIQUES IN SETTING X-RAY UNIT
- 17 WRITE EXPOSURE TECHNIQUE CHART FOR X-RAY
- 18 REPEAT SHOOTING OF X-RAY UNTIL X-RAY IS READABLE
- 19 TAKE X-RAYS WITH A CEPHALIO TUBE TILT
- 20 TAKE X-RAYS WITH A CAUDAL TUBE TILT
- 21 TAKE X-RAYS USING SCREEN TECHNIQUE
- 22 TAKE X-RAYS USING FIXED GRID TECHNIQUE
- 23 TAKE X-RAYS USING CARDBOARD TECHNIQUE
- 24 TAKE X-RAYS USING BUCKY TECHNIQUE
- 25 TAKE TOMOGRAMS, LAMINOGRAMS, PLANOGRAMS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 02
| OF RESPONSE BOOKLET

26 | TAKE STEREOSCOPIC X-RAYS

27 | TAKE LATERAL DECUBITUS X-RAY OF CHEST

28 | TAKE LATERAL DECUBITUS X-RAY OF ABDOMEN

29 | PERFORM DEEP ROENTGEN THERAPY

30 | PERFORM SUPERFICIAL ROENTGEN THERAPY

31 | TAKE PORTAL FILM OF AREA BEING TREATED WITH COBALT

32 | INFORM DOCTOR OF UNEXPECTED X-RAY FINDINGS

33 | READ X-RAY FILMS FOR TECHNICAL ADEQUACY

34 | POINT OUT POSSIBLE ABNORMALITIES ON X-RAY FILM TO DOCTOR

35 | DETECT LUNG ABNORMALITIES ON X-RAY FILM

36 | DETECT BONE ABNORMALITIES ON X-RAY FILM

37 | DETECT TISSUE ABNORMALITIES ON X-RAY FILM

38 | CHECK FOR/REPORT PRESENCE OF FETUS OR STONES ON KUB X-RAY

39 | DEVELOP MEDICAL X-RAY FILMS

40 | DEVELOP INDUSTRIAL X-RAY FILMS

41 | REVIEW/INSPECT X-RAY FILMS FOR DISPOSAL

42 | TEST CASSETTES FOR SCREEN FILM CONTACT

43 | TEST CASSETTES FOR SCREEN LAG

44 | PREPARE FILM PROCESSING CHEMICALS

45 | INSPECT X-RAY FILM QUALITY TO EVALUATE DEVELOPMENT TECHNIQUES

46 | INSPECT CONDITION OF FILM STORAGE AREAS, I.E. FOR PROPER TEMPERATURE/LIGHT/HUMIDITY

47 | STORE UNEXPOSED FILMS

48 | SUPERVISE DARKROOM PROCEDURES

49 | RETRIEVE SILVER FROM X-RAYS

50 | CHECK X-RAY DARK ROOM FOR LIGHT LEAKS

1	INSPECT PHOTODOSIMETRY FILM PRIOR TO ISSUE
2	PREPARE PHOTODOSIMETRY FILM FOR SUBMISSION TO PROCESSING ACTIVITY
3	PROCESS BETA, GAMMA AND/OR NEUTRON FILMS
4	DO PHOTODOSIMETRIC CHECK FILM PROCESS
5	EVALUATE BETA, GAMMA FILMS
6	REVIEW DEFENSIVE MEASURES AGAINST NBC EFFECTS
7	COMPARE FILM BADGE AND POCKET DOSIMETER READINGS
8	INVESTIGATE CASES OF LOST AND DAMAGED PERSONNEL MONITORING DEVICES
9	INVESTIGATE FILM BADGE AND POCKET DOSIMETER READING DISCREPANCIES
10	INVESTIGATE PHOTODOSIMETRIC CHECK FILM PROCESSING DISCREPANCIES
11	INVESTIGATE CASES OR REPORTS OF OVEREXPOSURES TO RADIATION
12	REVIEW RADIATION EXPOSURE REPORTS
13	ANALYZE RADIATION DATA TO MAKE PREDICTIONS OF PERSONNEL EXPOSURE
14	RECOMMEND PROCEDURE CHANGES TO IMPROVE RADIATION SAFETY
15	RECOMMEND ARRANGEMENT OF EQUIPMENT FOR MAXIMUM RADIATION SAFETY
16	SPECIFY PERSONNEL RADIATION PROTECTION EQUIPMENT
17	CHECK SAFETY OF RADIATION PROTECTIVE CLOTHING
18	INFORM WARD PERSONNEL OF PRECAUTIONS IN HANDLING PATIENT ON RI THERAPY
19	ADVISE PERSONNEL/PATIENT ON ROUTINE RADIATION SAFETY PRECAUTIONS
20	REQUEST SPECIFIC LAB TEST/PHYSICALS FOR PERSONNEL EXPOSED TO IONIZING RADIATION
21	POST FILM BADGES TO SURVEY RADIATION IN X-RAY OR RADAR AREAS
22	TEST FOR EXTENT OF RADIATION EMISSION FROM INDUSTRIAL X-RAYS
23	INSTALL ENVIRONMENTAL RADIATION MONITORING DEVICES
24	MONITOR PATIENT CLOTHING, LINEN, AND WASTES FOR RADIOACTIVE CONTAMINATION FOLLOWING RI THERAPY
25	MONITOR RADIATION LEVELS IN FOOD AND WATER

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 03 OF RESPONSE BOOKLET
26	MONITOR ATMOSPHERE FOR SCATTERED RADIATION
27	INSPECT WARD FACILITIES FOR PROTECTION AGAINST RADIATION HAZARD
28	MONITOR THE PATIENT AREA AND ESTABLISH THE 2 MR LINE
29	SURVEY/DECONTAMINATE ROOM OCCUPIED BY RI THERAPY PATIENT
30	MONITOR RI THERAPY AREA FOR POSSIBLE RESIDUAL RADIOACTIVITY
31	DETERMINE RADIATION LEVEL OF CADAVERS PRIOR TO AUTOPSY
32	PERFORM SAFETY INSPECTIONS OF AREAS WHERE RADIOACTIVE MATERIALS ARE USED
33	PERFORM SAFETY INSPECTIONS OF AREAS WHERE RADIATION PRODUCING EQUIPMENT IS USED
34	INSPECT NEW LABORATORIES WHERE USE OF RADIOACTIVE MATERIALS IS PROPOSED
35	PERFORM SWIPE SURVEYS FOR RADIOACTIVE CONTAMINATION
36	DO RADIATION AREA SURVEYS USING PORTABLE MONITORING DEVICES
37	DO RADIATION SURVEY IN RP STORAGE AREA
38	MONITOR ATMOSPHERE FOR CONTAMINATION WITH RADIOACTIVE GASES
39	MONITOR ATMOSPHERE FOR CONTAMINATION WITH RADIOACTIVE PARTICULATES
40	CALCULATE RADIOACTIVE DECAY
41	CALCULATE RADIOACTIVE CONTAMINATION LEVELS FROM SWIPE SURVEYS
42	PERFORM LEAK TEST OF SEALED RADIOACTIVE SOURCES
43	CALCULATE ACTIVITIES DETECTED FROM LEAKING SEALED SOURCES
44	CALCULATE ACTIVITIES OF RADIOACTIVE SOURCES
45	CALCULATE DOSE RATE FROM RADIOACTIVE SOURCES
46	CALCULATE STAY TIMES FOR RADIATION AREAS
47	CALCULATE SHIELDING REQUIREMENTS FOR RADIOACTIVE SOURCES
48	DO SHIELDING OF RADIOACTIVE MATERIAL
49	DISPOSE OF CONTAMINATED MATERIALS PER AEC REQUIREMENTS
50	DISPOSE OF EXPIRED RP MATERIALS PER AEC REQUIREMENTS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 04
| OF RESPONSE BOOKLET

- 1 | SUPERVISE DISPOSAL OF RADIOACTIVE WASTE
- 2 | PERFORM RADIOACTIVE DECONTAMINATION OF EQUIPMENT/SPACES
- 3 | DECONTAMINATE PERSONNEL SUBJECTED TO ABNORMAL INTERNAL RADIATION EXPOSURE
- 4 | DECONTAMINATE PERSONNEL SUBJECTED TO ABNORMAL EXTERNAL RADIATION EXPOSURE
- 5 | PERFORM SIMULATED RADIOACTIVE DECONTAMINATION OF PERSONNEL
- 6 | SUPERVISE HANDLING OF CONTAMINATED CASUALTIES FROM NUCLEAR ACCIDENTS/SPILLS
- 7 | SUPERVISE HANDLING OF CONTAMINATED CASUALTIES FROM SIMULATED NUCLEAR ACCIDENTS/SPILLS
- 8 | SUPERVISE DECONTAMINATION OF GROSSLY CONTAMINATED PERSONNEL FROM NUCLEAR ACCIDENTS/SPILLS
- 9 | SUPERVISE DECONTAMINATION OF PERSONNEL FROM SIMULATED NUCLEAR ACCIDENTS/SPILLS
- 10 | PREPARE FOR AEC INSPECTION
- 11 | REVIEW DEFENSIVE MEASURES AGAINST NBC EFFECTS
- 12 | PLAN MEDICAL DEPARTMENT RESPONSE IN EVENT OF NUCLEAR ACCIDENT
- 13 | COORDINATE RADIOPHARMACEUTICAL ACTIVITIES WITH PUBLIC INFORMATION OFFICE
- 14 | ADVISE COMMAND ON MAXIMUM RADIATION EXPOSURES INDIVIDUALS MAY RECEIVE
- 15 | RECEIVE RADIOPHARMACEUTICAL
- 16 | INSPECT RADIOPHARMACEUTICAL
- 17 | DISTRIBUTE RADIOPHARMACEUTICAL TO CLINIC SECTIONS
- 18 | SHIP RADIOPHARMACEUTICAL
- 19 | RECORD RECEIPT AND ISSUE OF RADIOPHARMACEUTICAL
- 20 | MAINTAIN SAFE STORAGE AREA FOR RADIOPHARMACEUTICAL
- 21 | STORE RADIOPHARMACEUTICAL
- 22 | CALCULATE RADIOPHARMACEUTICAL DOSE
- 23 | CALCULATE RADIOPHARMACEUTICAL DOSE USING SURFACE AREA - BODY WEIGHT FORMULA
- 24 | ASSAY INCOMING RADIOPHARMACEUTICAL
- 25 | ASSAY 99M-TC BY DILUTION METHOD

1	TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 04 OF RESPONSE BOOKLET
26		ASSAY 99M-TC BY DOSE CALIBRATOR
27		ASSAY 99M-TC BY QUARTZ FIBER ELECTROSCOPE
28		ASSAY 99M-TC BY COMMERCIAL COMPANY PROCEDURE
29		ASSAY 113M-IN BY COMMERCIAL COMPANY PROCEDURE
30		ASSAY 131-I THERAPY DOSE
31		DETERMINE RADIO-ACTIVE MOLYBDENUM CONTENT OF 99M-TC ELUATE
32		DETERMINE CHEMICAL MOLYBDENUM CONTENT OF 99M-TC ELUATE
33		DETERMINE ALUMINA CONTENT OF 99M-TC ELUATE
34		DETERMINE BOUND/UNBOUND RADIOPHARMACEUTICAL BY IITC/PAPER CHROMATOGRAPHY
35		DETERMINE ACTIVITY OF RADIOPHARMACEUTICAL BY ANIMAL ORGAN DISTRIBUTION STUDIES
36		DO MICROSCOPIC PARTICLE SIZING OF RADIOPHARMACEUTICAL
37		PREPARE 99M-TC SULFUR COLLOID BY COMMERCIAL METHOD
38		PREPARE 99M-TC SULFUR COLLOID BY LOCALLY DEVELOPED METHOD
39		PREPARE CHEMICAL SOLUTIONS FOR LOCALLY PREPARED RADIOPHARMACEUTICAL
40		PREPARE 99M-TC FE(OH)3 FOR LUNG SCANNING
41		PREPARE 99M-TC ALBUMIN MICRO-SPHERES FOR LUNG SCANNING
42		PREPARE 99M-TC DTPA FOR KIDNEY SCANNING
43		PREPARE 99M-TC ALBUMIN FOR CISTERNOGRAPHY
44		PREPARE ORAL 18-F FOR BONE SCANNING
45		PREPARE INTRAVENOUS 18-F FOR BONE SCANNING
46		PREPARE RADIOPHARMACEUTICAL FOR I.V. INJECTION
47		PREPARE 131-I THERAPY DOSE FOR OUT-PATIENTS
48		PREPARE 131-I ORAL THERAPY DOSE FOR IN-PATIENTS
49		SHIP/TRANSPORT RADIOCHEMICAL COMPOUNDS TO OTHER LABS FOR TESTING
50		DEVELOP NEW RADIOPHARMACEUTICAL

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 05
| OF RESPONSE BOOKLET

- 1 | COORDINATE WITH INDUSTRY IN THE DEVELOPMENT OF NEW RADIOPHARMACEUTICAL
- 2 | EVALUATE NEW CLINICAL RADIOPHARMACEUTICAL
- 3 | CALCULATE INTERNAL DOSE FOR NEW RADIOPHARMACEUTICAL
- 4 | PERFORM ^{131}I THYROID UPTAKE MEASUREMENT
- 5 | PERFORM $^{99\text{m}}\text{TC}$ THYROID UPTAKE MEASUREMENT
- 6 | PERFORM ^{125}I THYROID UPTAKE MEASUREMENT
- 7 | PERFORM ^{131}I THYROID SCAN
- 8 | PERFORM ^{125}I THYROID SCAN
- 9 | PERFORM $^{99\text{m}}\text{TC}$ THYROID SCAN
- 10 | PERFORM CYTOMEL SUPPRESSION TEST
- 11 | PERFORM TSH STIMULATION TEST
- 12 | PERFORM PERCHLORATE WASHOUT TEST
- 13 | ASSAY ^{131}I THERAPY DOSE
- 14 | PERFORM POST THERAPY THYROID SCAN AND URINARY EXCRETION STUDY
- 15 | PERFORM 5:1 RATIO BONE SCAN
- 16 | PERFORM FINE DETAIL BONE SCAN
- 17 | PERFORM POSITRON BONE SCAN
- 18 | PERFORM BONE MARROW SCAN
- 19 | PERFORM ROUTINE BRAIN SCAN
- 20 | PERFORM BRAIN SCAN WITH VERTEX VIEW
- 21 | PERFORM CISTERNOGRAPHY SCAN
- 22 | PERFORM CSF LEAKAGE TEST SCAN
- 23 | PERFORM CISTERNOGRAPHY USING $^{99\text{m}}\text{TC}$ ALBUMIN
- 24 | PERFORM CISTERNOGRAPHY USING ^{131}I HSA
- 25 | PERFORM HEART BLOOD POOL SCAN

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 05
	OF RESPONSE BOOKLET

26 | PERFORM LIVER SCAN USING 198-AU

27 | PERFORM LIVER SCAN USING 99M-TC SULFUR COLLOID

28 | PERFORM LUNG SCAN USING 131-I MAA

29 | PERFORM LUNG SCAN USING 99M-TC FERROUS HYDROXIDE

30 | PERFORM LUNG SCAN USING 99M-TC MICROSFERES

31 | PERFORM LIVER-LUNG SCAN

32 | PERFORM PAROTID SCAN

33 | PERFORM KIDNEY SCAN USING 99M-TC DTPA

34 | PERFORM KIDNEY SCAN USING 197-MG

35 | PERFORM ISOTOPE RENOGRAHM

36 | PERFORM 99M-TC SULFUR COLLOID SPLEEN SCAN

37 | PERFORM 51-CR TAGGED RBC, HEAT ALTERED, SPLEEN SCAN

38 | PERFORM 51-CR TAGGED RBC, CHEMICAL ALTERED, SPLEEN SCAN

39 | PERFORM PANCREAS SCAN

40 | PERFORM 99M-TC PLACENTAL SCAN

41 | PERFORM POLAROID DYNAMIC FLOW STUDIES

42 | PERFORM 35MM DYNAMIC FLOW STUDIES

43 | PERFORM 8MM DYNAMIC FLOW STUDIES

44 | PERFORM INHALATORY LUNG PERFUSION STUDIES

45 | SET PROPER MARGINS FOR DESIRED AREAS OF SCAN

46 | NOTE ANATOMICAL LANDMARKS ON PHOTO SCAN

47 | NOTE ANATOMICAL LANDMARKS ON PAPER SCAN

48 | DEVELOP SCANS

49 | EVALUATE SCAN FOR TECHNICAL ADEQUACY

50 | DETERMINE CRYSTAL RESOLUTION OF SCINTILLATION COUNTERS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 06
| OF RESPONSE BOOKLET

- 1 | PREPARE COLLIMATOR ISO-RESPONSE CURVE
- 2 | PREPARE RADIACTIVE COUNTING STANDARDS
- 3 | PREPARE LARGE VOLUME RADIACTIVE COUNTING STANDARDS
- 4 | COUNT LARGE SAMPLES IN FRONT OF THE SCINTILLATION COUNTING SYSTEM
- 5 | DO T3 TEST USING COMMERCIAL KIT
- 6 | DO T3 TEST USING CONVENTIONAL BENCH METHOD
- 7 | DO T4 TEST USING COMMERCIAL KIT
- 8 | DO T4 TEST USING CONVENTIONAL BENCH METHOD
- 9 | DO POST RADIOTHERAPY URINE ASSAY
- 10 | DO GROWTH HORMONE ASSAY (R.I. TECHNIQUE)
- 11 | DO INSULIN IMMUNO ASSAY (R.I. TECHNIQUE)
- 12 | DETERMINE ^{131}I CONVERSION RATIO
- 13 | DETERMINE TOTAL BLOOD VOLUME (DUAL TRACER)
- 14 | DETERMINE TOTAL BLOOD VOLUME (SINGLE TRACER)
- 15 | DETERMINE PLASMA VOLUME USING RISA
- 16 | DETERMINE RED CELL VOLUME USING ^{51}CR
- 17 | TAG RED CELLS BY THE UNITAG METHOD
- 18 | TAG RED CELLS BY THE SQUIBB METHOD
- 19 | TAG RED CELLS BY THE ASCORBIC ACID METHOD
- 20 | TAG RED CELLS BY A LOCALLY DEVELOPED METHOD
- 21 | READ NORMAL VALUES FOR RED CELL AND PLASMA VOLUME FROM REFERENCE TABLE
- 22 | PERFORM RED CELL SURVIVAL AND SEQUESTRATION STUDY (R.I. TECHNIQUE)
- 23 | PERFORM VITAMIN B-12 ABSORPTION TEST WITH AND WITHOUT INTRINSIC FACTOR
- 24 | PERFORM VITAMIN B-12 R.I. STUDY BY THE PLASMA CONCENTRATION METHOD
- 25 | PERFORM VITAMIN B-12 R.I. STUDY BY THE FECAL EXCRETION METHOD

GO TO RIGHT HAND PAGE

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 06
| OF RESPONSE BOOKLET

26 | PERFORM ORAL 59-FE ABSORPTION STUDY

27 | PERFORM IRON KINETICS (I.V.) STUDY

28 | TAG 59-FE FERROUS CITRATE PLASMA IN VITRO

29 | PERFORM PANCREATIC FUNCTION AND FAT ABSORPTION STUDIES USING
| LABELED FATTY ACID

30 | PERFORM GASTROINTESTINAL PROTEIN LOSS STUDIES

31 | TAG SERUM PROTEINS IN-VITRO

32 | TAG SERUM PROTEINS IN-VIVO

33 | PERFORM GASTROINTESTINAL BLOOD LOSS STUDIES

34 | PERFORM ALBUMIN TURNOVER STUDIES

35 | PERFORM 51-CR EDTA G.F.R.

36 | PERFORM 86-RB OR 42-K FLUX STUDIES

37 | PERFORM TOTAL BODY WATER MEASUREMENT (R.I. TECHNIQUE)

38 | CALCULATE ORGAN COUNT RATIOS (R.I. TECHNIQUE)

39 | CALCULATE INDIVIDUAL NORMAL VALUES FOR RED CELL AND PLASMA
| VOLUMES

40 | CALCULATE ALBUMIN TURNOVER

41 | CALCULATE ORAL 59-FE ABSORPTION

42 | CALCULATE I.V. 59-FE ABSORPTION

43 | CALCULATE BLOOD VOLUMES FROM VALUES OBTAINED THROUGH
| RADIOISOTOPE STUDIES

44 | PERFORM 131-I HSA PLACENTAL LOCALIZATION

45 | PERFORM 57-COBALT PARATHYROID LOCALIZATION STUDY

46 | PERFORM 22-NA SKIN GRAFT TRANSFER TIME

47 | RECEIVE PATIENTS ON ARRIVAL, I.E. INTRODUCE SELF, OBTAIN
| PATIENT'S NAME

48 | VERIFY IDENTIFICATION OF PATIENT, E.G. FOR TREATMENT,
| MEDICATIONS, EXAMINATION

49 | INSTRUCT OR HELP PATIENT/FAMILY FILL OUT FORMS

50 | MEASURE/WEIGH PATIENT OR PERSONNEL

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 07
| | OF RESPONSE BOOKLET

- 1 | INFORM PATIENT OF PROCEDURES REQUIRED PRIOR TO/DURING EXAMINATION/TEST/TREATMENT
- 2 | EXPLAIN/ANSWER PATIENT'S QUESTIONS REGARDING EXAMINATION/TEST/TREATMENT PROCEDURES
- 3 | REVIEW WITH PATIENT PRINTED INSTRUCTIONS FOR EXAMINATION/THERAPY PROCEDURES
- 4 | ASK/INSTRUCT PATIENT TO COLLECT SPECIMEN
- 5 | CHECK WITH PATIENT TO ENSURE THAT HE HAS COLLECTED SPECIMEN AS INSTRUCTED
- 6 | EXPLAIN/ANSWER QUESTIONS ABOUT DOCTOR'S INSTRUCTIONS TO PATIENT/FAMILY
- 7 | LOAD/UNLOAD PATIENTS FROM STRETCHERS (GURNEY)
- 8 | ASSIST PATIENTS IN/OUT OF BED, EXAM OR O.R. TABLES
- 9 | POSITION/HOLD PATIENT FOR EXAMINATION, TREATMENT, SURGERY
- 10 | MOVE/POSITION PATIENT WITH SUSPECTED FRACTURES OF EXTREMITIES
- 11 | MOVE/POSITION PATIENT WITH SUSPECTED SPINAL FRACTURES OR CORD INJURIES
- 12 | MOVE/POSITION PATIENT WITH HEAD INJURIES
- 13 | MOVE/POSITION PATIENT WITH SUSPECTED INTERNAL INJURIES
- 14 | MOVE/POSITION COMATOSE/ANESTHETIZED PATIENT
- 15 | DRAPE/GOWN PATIENT FOR EXAMINATION/TREATMENT
- 16 | RESTRAIN/CONTROL CHILDREN FOR EXAMINATION/TREATMENT/TEST
- 17 | RESTRAIN/CONTROL PATIENT VERBALLY
- 18 | RESTRAIN/CONTROL PATIENT PHYSICALLY, E.G. ARM HOLD
- 19 | ACCOMPANY PATIENT TO OTHER DEPARTMENTS/CLINICS
- 20 | TRANSPORT NON AMBULATORY PATIENT TO OTHER DEPARTMENTS/CLINICS
- 21 | ASK PATIENT/CHECK CHART FOR CONTRAINDICATION FOR TREATMENT, PROCEDURE, TEST
- 22 | ASCERTAIN IF PATIENT HAS BEEN PREPPED FOR TEST/TREATMENT PROCEDURE
- 23 | EXPLAIN X-RAY PROCEDURES TO PATIENT
- 24 | EXPLAIN SCAN PROCEDURES TO PATIENT
- 25 | EXPLAIN RADIATION THERAPY PROCEDURES TO PATIENT

1	TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 07 OF RESPONSE BOOKLET
26		EXPLAIN RADIATION SAFETY MEASURES TO PATIENT ON RADIOTHERAPY
27		REASSURE/CALM APPREHENSIVE (ANXIOUS) PATIENT
28		REASSURE APPREHENSIVE PARENTS OF PEDIATRIC PATIENT
29		REASSURE/CALM CHILDREN FOR EXAMINATION OR TREATMENT
30		GIVE ORAL DOSE OF RADIOPHARMACEUTICAL
31		ADMINISTER ORAL MEDICATION
32		ADMINISTER MEDICATION BY INTRAMUSCULAR INJECTION
33		ADMINISTER INTRADERMAL INJECTION
34		ADMINISTER MEDICATION BY SUBCUTANEOUS INJECTION
35		ADMINISTER MEDICATION BY INJECTION INTO IV TUBING
36		CALCULATE RATE OF I.V. FLOW, E.G. DROPS PER MINUTE
37		ADD/CHANGE I.V. BOTTLE DURING CONTINUOUS INFUSION
38		MONITOR/REGULATE INTRAVENOUS SOLUTION FLOW RATE
39		TERMINATE INTRAVENOUS DYE FLOW AND REMOVE INJECTOR
40		ADMINISTER I.V. DOSE OF RP
41		ADMINISTER NARCOTICS
42		OBSERVE/REPORT SYMPTOMS OF SIDE EFFECTS TO TREATMENT/MEDICATION
43		OBSERVE/RECORD PATIENT'S PHYSICAL/EMOTIONAL RESPONSE TO TREATMENT/DIAGNOSTIC PROCEDURES
44		CHECK PATIENTS TEMPERATURE
45		TAKE BLOOD PRESSURE
46		CHECK RADIAL (WRIST) PULSE
47		CHECK FEMORAL PULSE FOR PRESENCE AND QUALITY
48		CHECK PEDAL PULSE FOR PRESENCE AND QUALITY
49		DETERMINE APICAL PULSE RATE/RHYTHM WITH STETHESCOPE
50		OBSERVE/REPORT SYMPTOMS OF SIDE EFFECTS TO TREATMENT/MEDICATION

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 08
| OF RESPONSE BOOKLET

1 | TEST FOR ALLERGIC RESPONSE TO A SPECIFIC AGENT, E.G. DYE/DRUG

2 | PLAN/MODIFY DIAGNOSTIC PROCEDURES ACCORDING TO PATIENT'S
| RESPONSE/NEED

3 | APPLY/REMOVE SLING, E.G. ARM, LEG

4 | APPLY/REMOVE SPLINT

5 | GIVE EMERGENCY TREATMENT/FIRST AID FOR CARDIAC ARREST

6 | GIVE EMERGENCY TREATMENT/FIRST AID FOR RESPIRATORY IMPAIRMENT

7 | GIVE EMERGENCY TREATMENT/FIRST AID FOR SEVERE DRUG REACTION

8 | GIVE EMERGENCY TREATMENT/FIRST AID FOR SHOCK

9 | GIVE EMERGENCY TREATMENT/FIRST AID FOR HEAD INJURY

10 | GIVE EMERGENCY TREATMENT/FIRST AID FOR SPINAL CORD INJURY

11 | GIVE EMERGENCY TREATMENT/FIRST AID FOR EXTERNAL HEMORRAGE

12 | GIVE EXTERNAL CARDIAC MASSAGE

13 | GIVE OXYGEN THERAPY, I.E. CANNULA, CATHETER/MASK

14 | REVIEW DOCTOR'S ORDERS AND INSTRUCTIONS WITH DOCTOR

15 | OBTAIN CLARIFICATION OF CONFLICTING DOCTOR'S ORDERS

16 | MAKE SUGGESTION REGARDING NEED FOR DIAGNOSTIC TESTS

17 | INFORM WARD PERSONNEL OF PRECAUTIONS IN HANDLING PATIENT ON RI
| THERAPY

18 | INFORM DOCTOR/NURSE OF PATIENT'S CONDITION, E.G. DESCRIPTION OF
| INJURY, SYMPTOMS, RESPONSE

19 | WRITE STANDARD INSTRUCTIONS FOR PATIENT CONCERNING EXAMINATIONS/
| THERAPY OR PROCEDURES

20 | ARRANGE FOR SPECIAL OR LATE MEALS FOR PATIENTS/VISITOR/STAFF

21 | SCHEDULE APPOINTMENTS FOR CLINIC/DEPARTMENT, E.G., MAINTAIN
| APPOINTMENT BOOK

22 | CONTACT OTHER DEPARTMENTS TO OBTAIN/COORDINATE PATIENT/PERSONNEL
| APPOINTMENTS

23 | LOCATE MISPLACED CHARTS/HEALTH RECORDS

24 | CHECK CONSULTATION REQUESTS TO INSURE THE CORRECT STUDY IS TO BE
| CARRIED OUT

25 | REVIEW AND FOLLOW THROUGH ON COMPLETED CONSULT REPORTS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 08
| OF RESPONSE BOOKLET

26 | INFORM DOCTOR OF ANY CONTRAINDICATIONS TO STUDY

27 | ARRANGE FOR/FOLLOW UP COMPLETION OF CLINICAL LABORATORY TEST

28 | MAINTAIN LOG OF RADIOISOTOPE STUDIES

29 | MAINTAIN LOG OF RESULTS OF STERILITY AND PYROGEN TESTING

30 | MAINTAIN LOG OF QUALITY CONTROL PROCEDURES

31 | ASSIGN SCAN IDENTIFICATION NUMBER

32 | CODE SCANS

33 | COPY SCANS

34 | FILE SCANS

35 | CHECK SCANS OUT TO THE WARDS OR DOCTORS

36 | SHIP OUT SCANS AND REPORTS TO OTHER MEDICAL ACTIVITIES

37 | ASSEMBLE PATIENT RECORDS FOR REVIEW BY DOCTOR

38 | PREPARE PATIENT RADIOPHARMACEUTICAL DOSE RECORD

39 | PICK UP/DELIVER SPECIMENS

40 | LABEL/ACCESSION SPECIMEN CONTAINERS, E.G. TUBES, SLIDES

41 | LOG SPECIMENS RECEIVED

42 | MEASURE/DILUTE/PRESERVE LAB SPECIMEN E.G. URINE, BLOOD FOR
| SUBSEQUENT TESTING

43 | CONVERT CENTIGRADE TEMPERATURE TO FAHRENHEIT OR VICE VERSA

44 | CALCULATE AND PREPARE PERCENT SOLUTIONS

45 | CALCULATE AND PREPARE NORMAL/MOLAR SOLUTIONS

46 | CALCULATE AND PREPARE MOLAL SOLUTIONS

47 | CALCULATE MILLIEQUIVALENTS/MILLIMOLES

48 | CALCULATE MOLAR/NORMAL CONCENTRATIONS OF REAGENTS FOR BUFFER
| PREPARATION

49 | PREPARE BUFFER SOLUTIONS

50 | WASH GLASSWARE/INSTRUMENTS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 09
| | OF RESPONSE BOOKLET

1 | DEPYROGENATE GLASSWARE

2 | CALCULATE LAB/DIAGNOSTIC TEST RESULTS

3 | CHECK/CORRECT CALCULATIONS PERFORMED BY OTHER TECHNICIANS

4 | COLLECT BLOOD BY VENIPUNCTURE

5 | COLLECT CAPILLARY BLOOD SAMPLE, I.E. FROM FINGER TIP, TOE OR EAR LOBE

6 | COLLECT BLOOD BY ARTERIAL PUNCTURE

7 | CENTRIFUGE BLOOD AND SEPARATE SERUM OR PLASMA

8 | USE LOCALLY DEVELOPED MANUALS/GUIDES TO FOLLOW ANALYTICAL PROCEDURES

9 | USE NAVY/DOD MANUALS TO STUDY ANALYTICAL PROCEDURES

10 | USE COMMERCIAL MANUALS TO FOLLOW ANALYTICAL PROCEDURES

11 | ASSESS ACCURACY OF ANALYSIS PERFORMED BY OTHER LABORATORIES

12 | ASSESS COMPLETENESS OF LABORATORY REPORTS

13 | MAINTAIN LOG OF RADIOISOTOPE STUDIES

14 | MAINTAIN LOG OF RESULTS OF STERILITY AND PYROGEN TESTING

15 | PLOT READING/VALUES ON SEMILOG PAPER

16 | CONSTRUCT CATHETERS FOR SPECIAL X-RAY EXAMINATIONS

17 | MONITOR EXPIRATION DATED PHARMACEUTICALS

18 | PREPARE AND MAINTAIN ANTIDOTE SECTION/LOCKER

19 | CHECK/COUNT NARCOTICS/CONTROLLED DRUGS

20 | SAFEGUARD POISONS

21 | PREPARE AND MAINTAIN X-RAY FILE ENVELOPES

22 | IDENTIFY RADIOPHOTOGRAPH

23 | FILE RADIOPHOTOGRAPHS

24 | MAINTAIN X-RAY FILM LIBRARY/FILE

25 | LOAN X-RAY FILMS TO DOCTORS/OTHER DEPARTMENTS

TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 09 OF RESPONSE BOOKLET
26	PREPARE X-RAY FILMS FOR MAILING
27	PREPARE RADIOGRAPHS FOR VIEWING BY DOCTOR
28	PREPARE X-RAY REPORTS FOR PHYSICIAN TO COMPLETE
29	LOG STD 519-A RADIOGRAPHIC REPORT
30	LOG NUMBER OF X-RAY EXPOSURES MADE ON EACH PATIENT
31	MAINTAIN ROENTGEN DIAGNOSTIC INDEX
32	MAINTAIN TECHNIQUE CHARTS
33	ISSUE FLUOROSCOPIC EXAMINATION SCHEDULES
34	MAINTAIN RADIATION EXPOSURE FILM FILES
35	MAINTAIN FILES OF PERSONNEL WHO ARE INCIDENTALLY EXPOSED TO RADIATION
36	PREPARE REQUESTS FOR PERSONNEL RADIATION EXPOSURE HISTORY
37	LOG PERSONNEL EXPOSURES ON DD1141
38	PREPARE INTERCOMMAND REPORTS OF PERSONNEL EXPOSURE - VISITORS AND TRANSFERRED PERSONNEL
39	PREPARE EVALUATION REPORTS OF PERSONNEL RADIATION MONITORING DEVICES
40	ISSUE PERSONNEL MONITORING DEVICES, E.G. POCKET DOSIMETER, FILM BADGE
41	COLLECT PERSONNEL MONITORING DEVICES FOR PROCESSING
42	MAINTAIN PHOTODOSIMETRY LOGS
43	MAINTAIN FILES OF RECEIPT/TRANSFER OF RADIOACTIVE MATERIAL
44	MAINTAIN RADIOACTIVE MATERIAL INVENTORY
45	MAINTAIN RECORDS OF RADIOACTIVE WASTE TRANSFERS
46	MAINTAIN FILES OF CALIBRATED RADIOACTIVE SOURCES
47	MAINTAIN SEALED SOURCE INVENTORY AND LOCATION
48	MAKE FORMAL REQUESTS FOR RADIATION SOURCE CHANGES
49	MAINTAIN INVENTORIES OF RADIATION MONITORING EQUIPMENT RESERVED FOR DISASTER CONTROL
50	MAINTAIN LOCATIONS OF OPERATIONAL RADIATION MONITORING EQUIPMENT

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 10
| OF RESPONSE BOOKLET

- 1 | MAINTAIN RADIATION SURVEY FILES
- 2 | PROCESS/DISSEMINATE NBC INFORMATION
- 3 | DRAFT WARD/CLINIC ACCIDENT/INCIDENT REPORTS, I.E. WORK INJURY REPORTS FOR PATIENTS OR STAFF
- 4 | PREPARE NAVMED 1432 A,B,C (PHOTODOSIMETRY/RADIATION)
- 5 | MAINTAIN APPROVED USER FILE
- 6 | PREPARE AEC LICENSE ADMENDENTS
- 7 | REQUEST AEC LICENSE AMENDMENTS
- 8 | PREPARE DRUG INVESTIGATION FORMS FOR FDA AND AEC
- 9 | MAINTAIN AEC LICENSE FILES
- 10 | SET UP/REVIEW BLOOD COUNT RECORD KEEPING ON RADIOLOGY PERSONNEL
- 11 | PREPARE RADIOPHARMACEUTICAL CONTRACTS
- 12 | ARRANGE FOR HOUSEKEEPING/CLEANLINESS OF AREA
- 13 | DO HOUSEKEEPING/CLEANING DUTIES
- 14 | CHECK EQUIPMENT FOR ELECTRICAL HAZARDS AND GROUNDS
- 15 | DO PERIODIC MECHANICAL SAFETY CHECKS ON POWER OPERATED EQUIPMENT
- 16 | ENFORCE ACCIDENT PREVENTION MEASURES
- 17 | CALIBRATE SAFETY RECORDING INSTRUMENTS, E.G. DOSIMETERS
- 18 | INSPECT FOR AVAILABILITY AND USE OF SAFETY EQUIPMENT IN HAZARDOUS AREAS
- 19 | INSPECT FOR USE OF PROTECTIVE CLOTHING IN OCCUPATIONALLY HAZARDOUS AREAS
- 20 | DISPOSE OF HAZARDOUS MATERIAL E.G. CULTURES/ ACIDS
- 21 | ORDER PHOTODOSIMETRIC FILM
- 22 | MAKE LOCAL (OPEN) PURCHASE OF SUPPLIES
- 23 | EVALUATE NEW EQUIPMENT, I.E. USER TEST
- 24 | READ EQUIPMENT MANUALS FOR OPERATION AND MAINTENANCE OF EQUIPMENT
- 25 | RUN TEST STANDARD TO CHECK ACCURACY OF EQUIPMENT

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE TO
| | OF RESPONSE BOOKLET

26 |CALIBRATE EQUIPMENT
|
27 |DO MINOR REPAIR ON EQUIPMENT
|
28 |SUPERVISE ROUTINE EQUIPMENT MAINTENANCE FOR SECTION/UNIT
|
29 |PREPARE SCHEDULE FOR CONTRACT PREVENTIVE MAINTENANCE
|
30 |PREPARE PAPERWORK FOR EQUIPMENT REPAIR/MAINTENANCE
|
31 |ARRANGE FOR REPLACEMENT/REPAIR OF EQUIPMENT AS REQUIRED
|
32 |COORDINATE WITH MANUFACTURERS/CONTRACTORS FOR EQUIPMENT REPAIR/
| MAINTENANCE
33 |MAINTAIN INVENTORY/STOCK OF EQUIPMENT/FURNITURE
|
34 |SURVEY EQUIPMENT TO DETERMINE CONTINUED SERVICEABILITY/USABILITY
|
35 |EVALUATE THE MAINTENANCE AND USE OF SUPPLIES, EQUIPMENT AND WORK
| SPACE
36 |DETERMINE SUPPLIES AND EQUIPMENT BUDGET
|
37 |CONFER/VISIT MANUFACTURERS/CONTRACTORS TO OBTAIN FIRST HAND
| KNOWLEDGE OF EQUIPMENT/SUPPLIES
38 |ORDER SUPPLIES/EQUIPMENT THROUGH FEDERAL SUPPLY SYSTEM
|
39 |SUPERVISE/DIRECT UNITS'S OJT PROGRAM
|
40 |PLAN CONTENT FOR OJT PROGRAM
|
41 |SCHEDULE LECTURES
|
42 |DESIGN TRAINING AIDS, ILLUSTRATIONS, GRAPHICS
|
43 |SELECT CLINICAL MATERIAL FOR INSTRUCTIONAL PURPOSES,E.G.
| PATIENTS,CASE STUDIES
44 |EVALUATE/SELECT AUDIOVISUAL MATERIALS,E.G. FILMS
|
45 |CONDUCT SEMINARS
|
46 |PLAN CONFERENCES FOR STUDENTS DURING PRACTICAL TRAINING
|
47 |TEACH FORMAL CLASSES
|
48 |ADMINISTER EXAMINATIONS
|
49 |COMPUTE TEST GRADES
|
50 |DEMONSTRATE CLINICAL PROCEDURES USING PATIENT/SUBJECT
|

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE II
| OF RESPONSE BOOKLET

1	SELECT WORK EXPERIENCES FOR STUDENT/TRAINEE
2	EVALUATE STUDENTS PERFORMANCE/PROGRESS
3	COORDINATE WITH SUPERVISORS/INSTRUCTORS ON STUDENT TRAINING
4	DESIGN SPECIAL RESEARCH EQUIPMENT/DEVICES
5	BUILD SPECIAL EQUIPMENT/DEVICES FOR RESEARCH
6	CALCULATE DOSAGES FOR PRESCRIBED EXPERIMENTS
7	RECORD/MAINTAIN RECORDS OF EXPERIMENTAL FINDINGS/TESTS
8	CONDUCT RESEARCH LITERATURE SEARCH/SURVEY
9	CALCULATE MEANS, STANDARD DEVIATIONS
10	PERFORM CALCULATIONS FOR ANALYSIS OF VARIANCE, CORRELATIONS, OR RELIABILITY MEASURES
11	MAINTAIN ANIMAL COLONY
12	ACT AS OBSERVER OF EXPERIMENTAL SUBJECTS/ANIMALS
13	OPERATE/CONTROL EQUIPMENT FOR EXPERIMENTAL TESTS
14	CALIBRATE/TEST EXPERIMENTAL EQUIPMENT/APPARATUS
15	WRITE RESEARCH PROGRESS REPORTS
16	SELECT EXPERIMENTAL SUBJECTS/ANIMALS
17	WRITE TECHNICAL PAPERS/REPORTS FOR PUBLICATION

Part II B

LIST OF INSTRUMENTS AND EQUIPMENT

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 12
| OF RESPONSE BOOKLET

- 1 TRAY, ANAESTHETIC, LOCAL
- 2 TRAY, ANAESTHETIC PENTOTHAL
- 3 TRAY, ANAESTHETIC PREPARATION
- 4 TRAY, ANAESTHETIC SPINAL
- 5 TRAY, ANAESTHETIC REGIONAL
- 6 CARDIAC ARREST TRAY/CART
- 7 TRAY, X-RAY ARTHROGRAM
- 8 TRAY, X-RAY BRONCHOGRAM
- 9 TRAY, X-RAY CHOLANGIogram
- 10 TRAY, X-RAY DISCOGRAM
- 11 TRAY, X-RAY I. V. PYELOGRAMS
- 12 TRAY, X-RAY MYELOGRAM
- 13 TRAY, X-RAY STALOGRAM
- 14 TRAY, CARDIAC ANGIOGRAM
- 15 TRAY, CARDIAC AORTOGRAM
- 16 TRAY, PNEUMOENCEPHALOGram
- 17 TRAY, ARTERIogram
- 18 HYSTEROSALPINGOGRAM TRAY
- 19 TRAY, LUMBAR PUNCTURE
- 20 OXYGEN CATHETERS
- 21 OXYGEN CYLINDER/TANK, PORTABLE
- 22 OXYGEN MASK
- 23 RESPIRATOR, BENNETT
- 24 RESPIRATOR BIRD
- 25 CLINICAL WEIGHT AND HEIGHT SCALES

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 12
| OF RESPONSE BOOKLET

26 | STETHOSCOPE
27 | SPHYGMOMANOMETER (BLOOD PRESSURE APPARATUS)
28 | VACUTAINER BLOOD COLLECTING SYSTEM
29 | SYRINGE/NEEDLES
30 | THERMOMETER, CLINICAL
31 | PORTABLE X-RAY UNIT
32 | STATIONARY X-RAY UNIT
33 | ELECTRO-CONVULSIVE X-RAY EQUIPMENT
34 | X-RAY POSITIONER, HEAD
35 | X-RAY, POLAROID UNIT
36 | X-RAY, CONTROL CONSOLE
37 | X-RAY, EQUIPMENT POWER UNIT
38 | X-RAY TRANSFORMER
39 | CALIPER
40 | X-RAY FILM VIEWER, STEREOSCOPE
41 | TILT TABLE
42 | PNEUMOENCEPHLOGRAM CHAIR
43 | LYSHOLM/HAFER GRID
44 | AUTOMATIC INJECTOR, X-RAY CONTRAST MATERIAL
45 | RADIATION THERAPY EQUIPMENT
46 | COBALT THERAPY MACHINES
47 | CAMERA, PHOTOFUOROGRAPHIC
48 | X-RAY/PHOTOFUOROGRAPHIC ROLL FILM VIEWER
49 | ILLUMINATOR, X-RAY FILM
50 | AUTOMATIC FILM CHANGER, E.G. SANCHEZ-PAREZ

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 13
| OF RESPONSE BOOKLET

1	X-RAY CASSETTE CHANGER
2	RAPID FILM (ROLL) CHANGER
3	X-RAY FILM VIEWER, STEREOSCOPE
4	X-RAY, FILM IDENTIFICATION PRINTER
5	X-RAY, FILM LIGHT PROOF STORAGE CABINET
6	IMAGE INTENSIFIER, FLUOROSCOPIC UNITS
7	FLUORO DEMONSTRATOR
8	OSCILLOSCOPE
9	PROCESSING MACHINE, X-RAY FILM, AUTOMATIC
10	X-RAY DEVELOPER, MANUAL, DRY PROCESS
11	PROCESSING MACHINE, X-RAY FILM, MANUAL
12	DEVELOPER PRINTER
13	DRYER, X-RAY FILM
14	ANTI-C COVERALLS
15	ANTI-C HOOD
16	FACE SHIELD, RADIATION
17	AIR FILTER RESPIRATOR
18	GLOVES, COTTON
19	GLOVES, RUBBER
20	SHOE COVERS
21	WATERPROOF ANTI-C CLOTHING
22	GOGGLES, RADIATION PROTECTIVE
23	POCKET DOSIMETER
24	POCKET DOSIMETER CHARGER
25	DT-60

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 13
| | OF RESPONSE BOOKLET

26 DT 60 READER, E.G. CP-95

27 FILM BADGE

28 DENSITOMETER, E.G. MCBETH GN-304

29 THERMOLUMINESCENT DOSIMETER

30 THERMOLUMINESCENT DOSIMETER READER

31 HD-251/UD AIR SAMPLER, E.G. CADILLAC

32 PORTAVAC AIR SAMPLER

33 IC/T2-FD AIR SAMPLER

34 T-289 AIR SAMPLER

35 CONSTANT AIR MONITOR (CAM)

36 AIR PARTICLE DETECTOR (APD)

37 IC-T2-PA AIR SAMPLER

38 ALPHA SURVEY INSTRUMENTS, PORTABLE

39 FAST NEUTRON SURVEY INSTRUMENTS, PORTABLE

40 THERMAL NEUTRON SURVEY INSTRUMENTS, PORTABLE

41 PORTABLE BETA, GAMMA SURVEY INSTRUMENTS, RADIATION LEVELS UNDER 500 MR PER HOUR

42 PORTABLE BETA, GAMMA SURVEY INSTRUMENTS, RADIATION LEVELS UNDER 5000 MR PER HOUR

43 PORTABLE BETA, GAMMA SURVEY INSTRUMENTS, RADIATION LEVELS OVER 5000 MR PER HOUR

44 PORTABLE NON-INDICATING ION CHAMBER, E.G. R CHAMBER

45 NON INDICATING ION CHAMBER READER, E.G. CONDENSER, R-METER

46 QUARTZ-FIBER ELECTROSCOPE

47 DOSE CALIBRATOR

48 G-M COUNTER AND SCALER

49 PROPORTIONAL COUNTER AND SCALES

50 CRYSTAL SCINTILLATION COUNTER, SINGLE CHANNEL ANALYZER

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 14
| OF RESPONSE BOOKLET

1 CRYSTAL SCINTILLATION COUNTER, MULTI CHANNEL ANALYZER

2 SCINTILLATION SYSTEM FOR EXTERNAL ORGAN COUNTING

3 WHOLE BODY RADIATION COUNTER

4 LIQUID SCINTILLATION COUNTER

5 GAS FLOW COUNTING SYSTEM

6 SCANNER, PAPER DOT RECORDER

7 SCANNER, PHOTO RECORDER

8 WHOLE BODY SCANNER

9 RENOGRAF SYSTEM, DUAL PROBE

10 RENOGRAF SYSTEM, TRI PROBE

11 RENOGRAF SYSTEM WITH MAGNETIC TAPE

12 GAMMA CAMERA BASIC UNIT WITH ALL COLLIMATORS

13 GAMMA CAMERA ACCESSORY, RENOGRAF SYSTEM

14 GAMMA CAMERA ACCESSORY, POLAROID CAMERA AND ENLARGING SYSTEM

15 GAMMA CAMERA ACCESSORY, DYNAMIC FLOW, 8MM CAMERA

16 GAMMA CAMERA ACCESSORY, OSCILLOSCOPE

17 GAMMA CAMERA ACCESSORY, DYNAMIC FLOW 35MM CAMERA

18 GAMMA CAMERA ACCESSORY, VIDEO TAPE RECORDING SYSTEM

19 GAMMA CAMERA ACCESSORY, MULTI-DIMENSIONAL ANALYSIS SYSTEM

20 AUTO-ANALYZER, SINGLE OR DUAL CHANNEL

21 SEQUENTIAL MULTIPLE ANALYZER 4 CHANNEL

22 SEQUENTIAL MULTIPLE ANALYZER 12 CHANNEL

23 AUTOMATIC SAMPLE CHANGER

24 DRUM KYMOGRAPH

25 XY PLOTTER

TASK NO. ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 14
OF RESPONSE BOOKLET

26 STRIP CHART RECORDER

27 THIN LAYER CHROMATOGRAPHY APPARATUS

28 PAPER CHROMATOGRAPHY APPARATUS

29 99m -TC GENERATOR

30 113m -IN GENERATOR

31 MICROSCOPE WITH NEUBAUER COUNTING CHAMBER

32 RADIUM THERAPY, APPLICATORS

33 RADIUM IMPLANTS, PHARYNX

34 RADIUM IMPLANTS, VAGINA

35 THERMOMETER LABORATORY

36 AUTOMATIC PIPETTING MACHINE

37 MICROPIPETTE

38 PIPET

39 PIPET FILLER (RUBBER BULB)

40 VOLUMETRIC GLASSWARE (OTHER THAN BURETS AND PIPETS)

41 GLASS WASHER/DRYER

42 AUTOCLAVE, DRY HEAT

43 AUTOCLAVE, GAS

44 AUTOCLAVE, STEAM

45 ULTRASONIC CLEANER

46 NEEDLE WASHER

47 WATER DEMINERALIZER

48 DISTILLING APPARATUS, WATER

49 MICROFILTRATION SYSTEM

50 BURET, MICRO

1 TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 15
1 OF RESPONSE BOOKLET

1 BURETTE, MACRO

2 AUTOMATIC BURETTES

3 PHOTOMETRIC TITRATOR

4 PH METER

5 FLASK SHAKER

6 TUBE AGITATOR/MIXER/SHAKER

7 HOMOGENIZER/BLENDER

8 CENTRIFUGE, CLINICAL (TABLE MODEL)

9 CENTRIFUGE, LABORATORY (FLOOR MODEL)

10 CENTRIFUGE, REFRIGERATED

11 HEMATOCRIT READER

12 MICRO HEMATOCRIT CENTRIFUGE AND READER

13 WATER BATH WITH THERMOSTAT

14 DIRECT READ-OUT BALANCE, E.G. METTLER

15 ANALYTICAL BALANCE

16 TRIP BALANCE

17 AIR COMPRESSOR

18 SUCTION/VACUUM PUMP

19 SUCTION FUNNEL

20 LIGHT, ULTRAVIOLET, SPECIMEN EXAMINING

21 GAS BURNERS, E.G. BUNSEN

22 COMPRESSED GAS TANKS/CYLINDERS (OTHER THAN OXYGEN)

23 OXYGEN CYLINDER/TANK, PORTABLE

24 CHEMICAL FUME HOOD

25 FIRE EXTINGUISHER

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 15
| | OF RESPONSE BOOKLET

26	NUMBERING MACHINE
27	SLIDE RULE
28	ELECTRIC DESK CALCULATOR
29	TYPEWRITER
30	MOVIE PROJECTOR/ACCESSORIES
31	CLOSE CIRCUIT TV SYSTEM